UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,527	04/25/2001	Christopher L. Anderson	MS158543.1	7282

27195	7590	06/22/2004		

AMIN & TUROCY, LLP
24TH FLOOR, NATIONAL CITY CENTER
1900 EAST NINTH STREET
CLEVELAND, OH 44114

EXAMINER
KANG, INSUN

ART UNIT	PAPER NUMBER
2124	4

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		Applicant(s)
Office Action Summary	09/842,527		ANDERSON ET AL.
	Examiner		Art Unit
	Insun Kang		2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2001 and 04 February 2002*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
  closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date *3*.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. This action is responding to application papers dated 4/25/2001 and 2/4/2002.

2. Claims 1-49 are pending in the application.

Drawings

3.   The drawings are objected to because: the reference number 12 representing "object-based code representation" in Fig. 1 represents a "language-neutral representation," according to the specification.   A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4.   The disclosure is objected to because of the following informalities: there appears to be a typographical error: "a programs" in page 1 of the specification. It needs to be corrected to "a program."

       The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

5.   Content of Specification

       (e)   Background of the Invention: See MPEP § 608.01(c). The specification
               should set forth the Background of the Invention in two parts:

               (1)   Field of the Invention: A statement of the field of art to which the
                       invention pertains. This statement may include a paraphrasing of
                       the applicable U.S. patent classification definitions of the subject
                       matter of the claimed invention. This item may also be titled
                       "Technical Field."

(2)   Description of the Related Art including information disclosed under
       37 CFR 1.97 and 37 CFR 1.98: A description of the related art
       known to the applicant and including, if applicable, references to
       specific related art and problems involved in the prior art which are
       solved by the applicant's invention. This item may also be titled
       "Background Art."

The background section does not include specific related problems
involved in the prior art and the solution or improvement by the instant
invention.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter, which the applicant regards as his invention.

7.   Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Per claim 1, the term "agnostically" is a relative term, which renders the claim

indefinite. The term "agnostically" is not defined by the claim, the specification does not

provide a standard for ascertaining the requisite degree, and one of ordinary skill in the

art would not be reasonably apprised of the scope of the invention. It is interpreted as

"neutrally" for the purpose of examination.

Per claims 2-13, these claims are objected for dependency on the above rejected

parent claim 1.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   Claims 1-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-35 are non-statutory because they are directed to a "language-neutral representation" without recitation of a computer or a computer-readable medium embodying the representation. The claims merely recite a "language-neutral representation" that is disembodied arrangement so as to be called a "computer program" or compilation of facts, information, or data *per se*, without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer ("acts") or computer readable medium so as to enable the computer to perform the claimed limitations as recited.

Thus the claims represent functional descriptive material that is not capable of producing a useful result, and hence represent only abstract ideas. Therefore, the claims are non-statutory.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11.   Claims 1-49 are rejected under 35 U.S.C. 102(e) as being anticipated by

Bosworth et al. (US Patent 6,738,968) hereinafter referred to as "Bosworth."

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the

invention "by another," or by an appropriate showing under 37 CFR 1.131.

Per claim 1:

Bosworth discloses:

- a language-neutral representation of a compile unit transformable to at least

one of a plurality of different types of code representations (Bosworth, "the common

language output files...have executable instructions in a "common"...in the sense of

universal...intermediate language suitable for representing the concepts of a plurality of

different types of source languages...so that only one type of intermediate language

need be used regardless of the specific source language used," col. 13 lines 27-47)

-a hierarchal arrangement of program elements that agnostically characterize

the compile unit ("the association of metadata with the boxed value type permits the

storage of the boxed value type within the object class hierarchy," col. 13 lines 1-10 and

abstract)

- at least one of the program elements representing a type declaration that

characterizes at least one class of programmatic constructs of the compile unit ("The

objects of a class hierarchy, such as class hierarchy...typically derive from a base root

object," col. 11 lines 27-44)

as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Bosworth discloses:

-a collection of at least one member that characterizes programmatic attributes

associated with and able to be implemented within the at least one class (Bosworth,

"child boxed value types ...inherit methods and other attributes from parent boxed value

types...The dual representation of value types...as boxed value types in the object

class hierarchy implies that value types can have methods and can behave as objects,"

col. 12 lines 1-29) as claimed.

Per claim 3:

The rejection of claim 2 is incorporated, and further, Bosworth discloses an expression

class within the at least one class (Bosworth, "In the object class hierarchy..., built-in

value types...and user-defined value types...are stored as any other object within the

object class hierarchy..., providing the boxed value type with object-like attributes," col.

11 lines 45-62) as claimed.

Per claim 4:

The rejection of claim 2 is incorporated, and further, Bosworth discloses a statement

class within the at least one class (Bosworth, col. 7 lines 13-35) as claimed.

Per claim 5:

The rejection of claim 2 is incorporated, and further, Bosworth discloses a namespace

that contains the at least one class (Bosworth, col. 12 lines 60-67) as claimed.

Per claim 6:

The rejection of claim 1 is incorporated, and further, Bosworth discloses at least one of

the program elements of the hierarchal arrangement encapsulates another of the

program elements (Bosworth, col. 11 lines 27-44) as claimed.

Per claim 7:

The rejection of claim 1 is incorporated, and further, Bosworth discloses the interface

being operative to enable transformation of the language-neutral representation to a

corresponding desired code representation (Bosworth, "The front end compiler... in

addition to being able to read and analyze their respective source files... are capable of

reading and analyzing files represented in the common language," col. 13 lines 27-47;

col 11. lines 27-44) as claimed.

Per claim 8:

The rejection of claim 7 is incorporated, and further, Bosworth discloses that the

program elements comprise objects, each object exposing at least one of a method,

attribute, and property of each respective object, the interface being operative to employ

the at least one of method, attribute and property to facilitate the transformation into the

desired code representation ("The front end compiler... in addition to being able to read

and analyze their respective source files... are capable of reading and analyzing files

represented in the common language," col. 13 lines 27-47; "metadata provides a

common interchange mechanism for use between tools that manipulate objects," col. 12

lines 39-59) as claimed.

Per claim 9:

The rejection of claim 7 is incorporated, and further, Bosworth discloses a compiler

interface programmed to enable transformation of the language-neutral representation

to a corresponding low-level language code representation (Bosworth, "any translation

of the common language file into a form suitable for use by the runtime

environment... convert the received common output files...into output code that can be

executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 10:

The rejection of claim 9 is incorporated, and further, Bosworth discloses an assembly of

computer-executable instructions (Bosworth, "any translation of the common language

file into a form suitable for use by the runtime environment...convert the received

common output files...into output code that can be executed in the execution

environment," col. 14 lines 1-10) as claimed.

Per claim 11:

The rejection of claim 7 is incorporated, and further, Bosworth discloses a code

generator interface programmed to enable conversion of the language-neutral

representation to a corresponding high-level language code representation(Bosworth,

col. 13 lines 27-47 ;"any translation of the common language file into a form suitable for

use by the runtime environment...convert the received common output files...into output

code that can be executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 12:

The rejection of claim 1 is incorporated, and further, Bosworth discloses

-the program elements comprise instances of a plurality of language-neutral classes,

each instance defining an associated object (Fig. 3b and col. 11 lines 27-44) as

claimed.

Per claim 13:

The rejection of claim 12 is incorporated, and further, Bosworth discloses

at least one associated object represents the type declaration, at least another object

being encapsulated within the at least one object representing the at least one type

declaration, the at least another object representing program code of the compile unit

that derives from a class associated with the at least type declaration (Fig. 3b, "The objects of a class hierarchy, such as class hierarchy..., typically derive from a base root object," col. 11 lines 27-44) as claimed.

Per claim 14:

Bosworth discloses:

-A language-neutral representation of programmatic elements (Bosworth, "the common language output files... have executable instructions in a "common"... in the sense of universal... intermediate language suitable for representing the concepts of a plurality of different types of source languages... so that only one type of intermediate language need be used regardless of the specific source language used," col. 13 lines 27-47)

-an instance of at least one of a plurality of language-neutral classes, the plurality of classes representing different programmatic constructs of a compile unit and having a hierarchal relationship relative to each other, whereby transformation of the instance into a different representation of the respective programmatic construct is facilitated ("The objects of a class hierarchy, such as class hierarchy... typically derive from a base root object," col. 11 lines 27-44; "the association of metadata with the boxed value type permits the storage of the boxed value type within the object class hierarchy," col. 13 lines 1-10; "any translation of the common language file into a form suitable for use by the runtime environment... convert the received common output files...into output code that can be executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 15:

The rejection of claim 14 is incorporated, and further, Bosworth discloses

-each instance of a corresponding class of the plurality of classes represents a

respective programmatic construct of the compile unit, the plurality of instances being

organized in a hierarchal relationship based on the classes associated with the plurality

of instances and relationships among the programmatic constructs represented thereby

(Bosworth, col. 11 lines 27-44) as claimed.

Per claim 16:

The rejection of claim 15 is incorporated, and further, Bosworth discloses that each of

the plurality of instances exposes at least one item associated with the programmatic

construct represented thereby (Bosworth, col. 11 lines 27-44) as claimed.

Per claim 17:

The rejection of claim 16 is incorporated, and further, Bosworth discloses

- at least one of the plurality of instances represents a type declaration, at least another

instance being encapsulated within the instance representing the type declaration, the

at least another instance representing a programmatic construct that derives from the at

least type declaration(Fig. 3b, "The objects of a class hierarchy, such as class

hierarchy..., typically derive from a base root object," col. 11 lines 27-44).

Per claim 18:

The rejection of claim 17 is incorporated, and further, Bosworth discloses

at least one of a statement and an expression(Bosworth, "In the object class

hierarchy..., built-in value types... and user-defined value types... are stored as any

other object within the object class hierarchy..., providing the boxed value type with

object-like attributes," col. 11 lines 45-62; col. 7 lines 13-35) as claimed

Per claim 19:

The rejection of claim 16 is incorporated, and further, Bosworth discloses an interface

that enables transformation of the representation to the different representation, the

interface being operative to employ the at least one item to facilitate the transformation

of the language-neutral representation into the different representation (Bosworth, col.

13 lines 27-47;"any translation of the common language file into a form suitable for use

by the runtime environment... convert the received common output files...into output

code that can be executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 20:

The rejection of claim 19 is incorporated, and further, Bosworth discloses a compiler

interface programmed to enable transformation of the language-neutral representation

to a corresponding low-level language code representation (Bosworth, "any translation

of the common language file into a form suitable for use by the runtime

environment... convert the received common output files...into output code that can be

executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 21:

The rejection of claim 20 is incorporated, and further, Bosworth discloses an assembly of computer-executable instructions (Bosworth, "any translation of the common language file into a form suitable for use by the runtime environment...convert the received common output files...into output code that can be executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 22:

The rejection of claim 19 is incorporated, and further, Bosworth discloses a code generator interface programmed to enable generation of a high-level language code representation from the language-neutral representation (Bosworth, col. 13 lines 27-47 ;"any translation of the common language file into a form suitable for use by the runtime environment...convert the received common output files...into output code that can be executed in the execution environment," col. 14 lines 1-10) as claimed.

Per claim 23:

Bosworth discloses:

-A language-neutral representation of computer-executable instructions that are transformable to at least one other type of software code representation (Bosworth, "the common language output files...have executable instructions in a "common"...in the sense of universal...intermediate language suitable for representing the concepts of a

plurality of different types of source languages...so that only one type of intermediate language need be used regardless of the specific source language used," col. 13 lines 27-47)

-a hierarchal arrangement of objects, each object representing a different program element of the compile unit class (Bosworth, "In the object class hierarchy..., built-in value types...and user-defined value types...are stored as any other object within the object class hierarchy..., providing the boxed value type with object-like attributes," col. 11 lines 45-62)

-at least one class object that represents at least one defined class of program elements of the compile unit(Fig. 3b, "The objects of a class hierarchy, such as class hierarchy..., typically derive from a base root object," col. 11 lines 27-44)

-at least one member object associated with the at least one class object that represents computer-executable instructions operable on at least some program elements in the at least one defined class(Bosworth, "In the object class hierarchy..., built-in value types...and user-defined value types...are stored as any other object within the object class hierarchy..., providing the boxed value type with object-like attributes," col. 11 lines 45-62; col. 7 lines 13-35) as claimed

Per claim 24:

The rejection of claim 23 is incorporated, and further, Bosworth discloses a namespace object that represents a namespace of the compile unit, the namespace object

comprising a collection of class objects including the at least one class object

(Bosworth, col. 12 lines 60-67) as claimed.

Per claim 25:

The rejection of claim 24 is incorporated, and further, Bosworth discloses a plurality of

member objects associated with the at least one class object, wherein the at least

one class object represents a common base class that is shared by the plurality of

member objects ("The objects of a class hierarchy, such as class hierarchy...typically

derive from a base root object," col. 11 lines 27-44)

as claimed.

Per claims 26-31, these claims are another versions of the claimed

representation discussed in claims 18-22, respectively, and are rejected for the same

reasons set forth in connection with the rejections of claims 18-22 above.

Per claims 32-35, these claims are another versions of the claimed

representation discussed in claims 18-22, respectively, and are rejected for the same

reasons set forth in connection with the rejections of claims 18-22 above

Per claims 36-39, these claims are system versions of claims 23-26 and 31,

respectively, and are rejected for the same reasons set forth in connection with the

rejections of claims 23-26 above.

Per claim 40, it is the computer-readable medium version of claim 14,

respectively, and is rejected for the same reasons set forth in connection with the

rejection of claim 14 above.

Per claim 42, it is the method version of claim 39, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 39 above.

Per claims 45 and 46, these claims are system versions of claims 37 and 38 respectively, and are rejected for the same reasons set forth in connection with the rejections of claims 37 and 38 above.

Per claim 47, it is the method version of claim 29, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 29 above.

Per claim 49, it is the system version of claim 30, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 30 above.

12.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 703-305-6465. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 703-305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Insun Kang
Patent Examiner
6/10/2004

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100